

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of making a heterogeneous building block array, the method comprising:
applying building blocks to a solid support in a plurality of spots, the spots comprising ~~[[2,]]~~ 3, 4, or 5 ~~or 6~~ different building blocks; and
independently immobilizing the different building blocks to the support in the spots by covalent coupling, by an ionic interaction, or by a combination thereof;
wherein:
a first spot comprises a first combination of building blocks and a second spot comprises a second combination of building blocks;
at least one of the building blocks is naïve with respect to a test ligand; and
the spots of immobilized building blocks on the solid support form a heterogeneous building block array.
2. (Original) The method of claim 1, wherein immobilizing comprises covalent coupling.
3. (Original) The method of claim 2, wherein:
the support comprises an amine nitrogen and the building block comprises a carbonyl carbon;
the support comprises a carbonyl carbon and building block comprises an amine nitrogen;
or combination thereof.
4. (Withdrawn) The method of claim 1, wherein immobilizing comprises ionic interaction.
5. (Withdrawn) The method of claim 4, wherein:
the support comprises a carboxylate and the building block comprises an ammonium;
the support comprises an ammonium and the building block comprises a carboxylate;
or combination thereof.

6. (Withdrawn) The method of claim 4, wherein the support comprises amine, quaternary ammonium, ferrocene, or mixture thereof.
7. (Withdrawn) The method of claim 4, wherein the support comprises carboxylate, phenol substituted with strongly electron withdrawing group, phosphate, phosphonate phosphinate, sulphate, sulphonates, thiocarboxylate, hydroxamic acid, or mixture thereof.
8. (Withdrawn) The method of claim 4, wherein the building block comprises amine, quaternary ammonium, ferrocene, or mixture thereof.
9. (Withdrawn) The method of claim 4, wherein the building block comprises carboxylate, phenol substituted with strongly electron withdrawing group, phosphate, phosphonate phosphinate, sulphate, sulphonates, thiocarboxylate, hydroxamic acid, or mixture thereof.
10. (Original) The method of claim 1, further comprising mixing a plurality of building blocks and employing the mixture in forming the plurality of spots.
11. (Original) The method of claim 1, wherein the solid support comprises a glass plate or microscope slide.
12. (Currently Amended) A method of making a receptor surface, the method comprising:
applying building blocks to a region on a solid support, the region comprising 2, 3, 4, 5, or 6 different building blocks; and
independently immobilizing the different building blocks to the support by covalent coupling, by an ionic interaction, or by a combination thereof;
2 or more of the different building blocks together forming a candidate artificial receptor,
a lead artificial receptor, a working artificial receptor, or a combination thereof;
at least one of the building blocks being naïve with respect to a test ligand.

13. (Previously presented) The method of claim 12, further comprising mixing the different building blocks and employing the mixture in forming the receptor surface.

14. (Currently Amended) A method of making an artificial receptor, the method comprising:
applying building blocks to a region on a solid support, the region comprising 2, 3, 4, 5 ,
or 6 different building blocks;

independently coupling the different building blocks to the solid support in the region by
covalent coupling, by an ionic interaction, or by a combination thereof;

2 or more of the different building blocks together forming a candidate artificial receptor,
a lead artificial receptor, a working artificial receptor, or a combination thereof;

at least one of the building blocks being naïve with respect to a test ligand.

15. (Original) The method of claim 14, wherein the region is a spot.

16-79. (Canceled)

80. (Currently Amended) A method of making a heterogeneous building block array, the
method comprising:

applying building blocks on a solid support in a plurality of spots, the spots comprising
[[2,]] 3, 4, or 5, ~~or 6~~ different building blocks; and

independently immobilizing the different building blocks to the support in the spots by
covalent coupling, by an ionic interaction, hydrophobic interaction, or by a combination thereof;
wherein:

a first spot comprises a first combination of building blocks and a second spot
comprises a second combination of building blocks;

at least one of the building blocks is naïve with respect to a test ligand; and

the spots of immobilized building blocks on the solid support form a
heterogeneous building block array.

81. (Withdrawn) The method of claim 80, comprising immobilizing building blocks by
hydrophobic interaction.

82. (Withdrawn) The method of claim 81, wherein the support and building blocks comprise independently branched or straight chain, substituted or unsubstituted C₆₋₃₆ alkyl; branched or straight chain, substituted or unsubstituted C₆₋₃₆ alkenyl with 1 to 4 double bonds; branched or straight chain, substituted or unsubstituted C₆₋₃₆ alkynyl with 1 to 4 triple bonds; branched or straight chain, substituted or unsubstituted C₆₋₃₆ arylalkyl; branched or straight chain, substituted or unsubstituted C₆₋₃₆ arylalkenyl with 1 to 4 double bonds; branched or straight chain, substituted or unsubstituted C₆₋₃₆ arylalkynyl with 1 to 4 triple bonds; polyaromatic hydrocarbon; substituted or unsubstituted cycloalkane; or mixtures thereof.